इंटरनेट मानक

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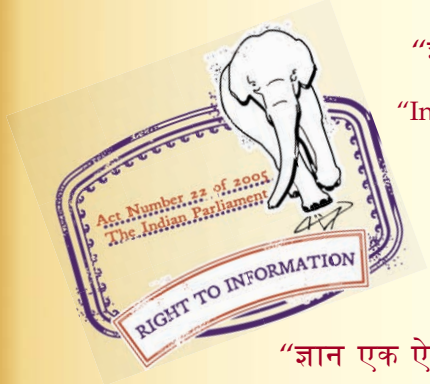
"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 11953 (1986): Driver and Bender for Rush Intramedullary Pin [MHD 2: Orthopaedic Instruments, Implants and Accessories]

"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"



"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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UDC 615·477 : 616·71-089-72 : 621·886

Indian Standard

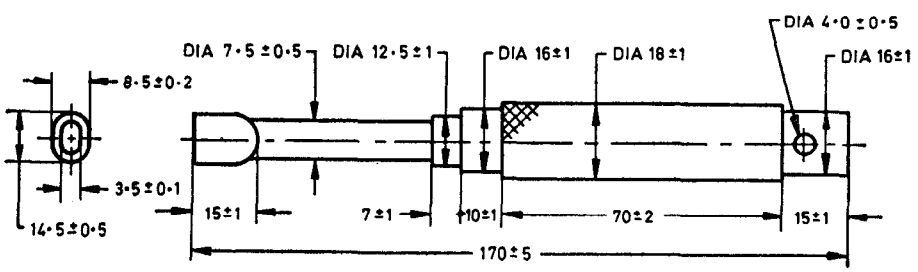
(Reaffirmed 2002)

SPECIFICATION FOR DRIVER AND BENDER FOR RUSH INTRAMEDULLARY PIN

1. Scope — Specifies dimensional and other requirements for driver and bender for Rush intramedullary pins used in orthopaedic surgery.

2. Material — Stainless steel conforming to Designation 30Cr13 of IS : 6603-1972 'Specification for stainless steel bars and flats'.

3. Shape and Dimensions — As shown in Fig. 1.



All dimensions in millimetres.

FIG. 1 DRIVER AND BENDER FOR RUSH INTRAMEDULLARY PIN

3.1 Deviation of ± 2·5 percent shall be permitted on all dimensions.

4. Workmanship

4.1 The driver and bender shall have a slot at one end for driving the rush pin and a hole on the other end for bending the pin.

4.2 It shall be free from pits, burrs, draw marks and other surface contaminations.

5. Heat Treatment — The driver and bender shall be hardened and tempered to 380 to 450 *HV*.

6. Surface Condition

6.1 *General* — All surfaces shall be free from pores, crevices and grinding marks. The instruments shall be supplied free from residual scale acid, grease and grinding and polishing materials. Compliance with these requirements shall be checked by inspection using normal vision (corrected, if necessary).

6.2 *Surface Finish* — The surface finish shall be one of, or a combination of, the following:

a) Mirror polished;

b) Reflection-reducing, for example satin finish, mat black finish; and

c) An applied surface coating, for example for insulation purposes.

Adopted 12 November 1986

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NEW DELHI 110002

Note — *The satin finish should be effected by an appropriate procedure such as grinding, brushing, electropolishing* and, in addition, satin finishing (glass beading or satin brushing). The finish should be uniform and smooth and it should reduce glare.

Instruments of mirror finish should be adequately ground to remove all surface imperfections and polished to remove grinding marks, resulting in a mirror finish. The mirror finish should be effected by an appropriate procedure, such as polishing, brushing, electropolishing, and mirror buffing.

6.3 *Passivation and Final Treatment* — The instruments shall, unless the metallurgical characteristics of the instruments (for example the presence of brazed or soldered joints) renders it inappropriate, be treated by a suitable passivation process.

Note — Examples of methods of passivation are by electropolishing or by treating with 10 percent (*v/v*) nitric acid solution for not less than 30 min at a temperature of not less than 10°C and not exceeding 60°C. The instruments should then be rinsed in water and dried in hot air.

7. Corrosion Resistance Test — Scrub the instrument with soap and warm water, rinse in hot water and then dip in 95 percent ethyl alcohol. Dry the instrument, immerse in copper sulphate solution at room temperature for 6 minutes and wash with fresh water or wet cotton wool.

The copper sulphate solution shall be made up as follows:

Copper sulphate ($CuSO_4.5H_2O$)	4·0 g
Sulphuric acid (H_2SO_4) (sp gr 1·84)	10·0 g
Distilled water [*See* IS : 1070-1977 Specification for water for general laboratory use (*revised*)]	90·0 ml

There shall be no red stains or spots on the instrument, but dulling of the polished surface may be permitted.

8. Marking — The driver and bender shall be marked with the manufacturers name, initials and recognized trade-mark.

8.1 *Certification Marking* — Details available with the Bureau of Indian Standards.

9. Packing — As agreed to between the purchaser and the supplier.

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